

AGROMYZID FLIES (DIPTERA: AGROMYZIDAE) NEW TO SCOTLAND, INCLUDING TWO NEW TO BRITAIN

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There appears to be no published records of the following species of agromyzid flies from Scotland. In addition two species are new to the British Isles. Nomenclature follows Chandler (1998).

Agromyza filipendulae Spencer, 1974

New to Scotland

This species with its characteristic linear leaf-mine in *Filipendula ulmaria* is widespread in Scotland, being known from vice-counties 72, 78, 79, 80, 82, 83, 88, 89, 90 and 91. First reared from leaf-mines collected on 13.ix.1992 at Mount Lothian (O.S. Grid NT2757), Midlothian (VC 83). Flies emerged 11.x.1992 (male genitalia checked).

A. frontella (Rondani, 1875)

New to Scotland

Reared from its characteristic leaf-mines in *Medicago sativa* collected at the site of the old railway station at Dalry (O.S. Grid NT2372), Edinburgh (VC 83) on 2.viii.2000. Flies emerged 25.viii.2000.

A. varicornis Strobl, 1898

New to Scotland

Leaf mines in cultivated sweet pea from Grange (O.S. Grid NT2672), Edinburgh (VC 83) on 24.ix.1992, produced adults of this species on 29.v.1993.

Cerodontha calamagrostidis Nowakowski, 1967

New to Scotland

Two male flies taken in a malaise trap at Carrifran Glen (O.S. Grid NT1513), Dumfriesshire (VC 72) on 23.vii.2000 proved to be this species. Identity confirmed from examination of male genitalia.

Chromatomyia luzulae (Hering, 1924)

New to Scotland

Abundant leaf-mines in *Luzula pilosa* in the Birks of Aberfeldy (O.S. Grid NN8547), Perthshire (VC 88) on 20.iii.1994, produced flies of this species between 7 and 12.v.1994. In spite of its abundance in this locality, I have failed to find it elsewhere.

Liriomyza cicerina (Rondani, 1875)

New to Scotland

The characteristic leaf-mines of this species in *Ononis repens* collected from Kincaig Point (O.S.

Grid NT4699), Fife (VC 85) on 13.ix.1998 produced only parasites but examination of the spiracular structure of the puparia (see Spencer, 1976) confirmed them to belong to *L. cicerina*.

L. hieracii (Kaltenbach, 1862)

New to Scotland

Reared from leaf-mines in *Hieracium* sp. found on The Scorrie (O.S. Grid NO2775), Glen Clova, Angus (VC 90) on 3.viii.1992. Flies emerged 31.v.-4.vi.1993.

L. latipalpis Hendel, 1920

New to Scotland

Although this species feeds in *Triglochin maritima*, a puparium found attached to *Salicornia* sp. at Aberlady Bay (O.S. Grid NT4780), East Lothian (VC 82) on 25.x.1980, produced a fly of this species on 7.v.1981 (genitalia checked).

L. pisivora Hering, 1954

New to Scotland

Now known from three widely scattered localities in Scotland: Mines in *Vicia cracca* collected 9.ix.1984 at Boltonmuir Wood (O.S. Grid NT5168), East Lothian (VC 82) produced this species on 22.v.1985; mines in *Lathyrus montanus* collected on 31.viii.1990 at Glen Fender Meadows (O.S. Grid NN8967), Perthshire (VC 89) produced this species between 4 to 17.v.1991 and further mines in *Vicia cracca* collected 1.vii.1992 at Newtonmore (O.S. Grid NN7298), Inverness-shire (VC 96) also yielded it on 29.v.1993. The record from Glen Fender Meadows was originally published as *L. congesta* (Becker, 1903) by Bland (1994). This has proved to be a misidentification and *L. congesta* must now be deleted from the Scottish list.

L. pusio (Meigen, 1830)

New to Scotland

Leaf-mines in an unidentified species of grass collected at Learan (O.S. Grid NN5757), Rannoch, Perthshire (VC 88) on 15.vii.1993 produced flies of this species 1-26.viii.1993.

Melanagromyza aenea (Meigen, 1830)

New to Scotland

Puparia in large old stems of *Urtica dioica* collected at Stockbridge (O.S. Grid NT2474), Edinburgh (VC 83) on 15.viii.1998 produced this species.

***M. angeliciphaga* Spencer, 1969**

New to Scotland & Wales

Internal stem mines in *Angelica sylvestris* from Crichton Glen (O.S. Grid NT3761), Midlothian (VC 83) on 3.v.1997 produced flies of this species on 25.v.1997. Similar mines were collected at Cors Geirch (O.S. Grid SH3235), Caernavonshire (VC 49), Wales on 24.v.1997 but the flies had already emerged. *M. angeliciphaga* has also been recorded from several further sites in VC 83, several sites in VC 88 and a single site in VC 85.

***M. astragali* Spencer, 1976**

New to Britain

Reared from puparia in dead stems of *Astragalus glycyphyllos* collected at Steeple View (O.S. Grid TQ6890), near Basildon, Essex (VC 18) on 20.ii.2000. Single fly emerged on 21.v.2000.

***Phytoliriomyza melampyga* (Loew, 1869)**

New to Scotland

Leaf-mines in *Impatiens glandulifera* collected at Stockbridge (O.S. Grid NT2474), Edinburgh (VC 83) on 15.viii.1998 produced flies of this species on 27.ix.1998. Leaf-mines also seen at Stanley, Perthshire (VC 88) and Kelvinside, Glasgow (VC 77).

***Phytomyza aquilegiae* Hardy, 1849**

Confirmed Scottish

This species originally described by James Hardy presumably from Berwickshire (VC 81) is well established in gardens in the Edinburgh area (VC 83 & 84).

***P. caulinaris* Hering, 1949**

New to Britain

Agromyzid larvae mining the stems of *Ranunculus repens* at Blackford (O.S. Grid NT2571), Edinburgh (VC 83) on 6.vii.1998 produced a single male fly of *P. caulinaris* on 19.vii.1998. Identity checked by examination of male genitalia (see Spencer, 1990).

***P. cirsii* Hendel, 1923**

New to Scotland

Leaf-mines in *Cirsium arvense* collected at Linn Dean (O.S. Grid NT4659), East Lothian (VC 82) on 10.vii.1999, produced flies of this species on 31.vii.1999.

***P. isais* Hering, 1936**

New to Scotland

Seedheads of *Odontites rubra* collected on the Isle of Iona (O.S. Grid NM2824), Inner Hebrides (VC 103) on 15.ix.1997 produced puparia of this species. Flies emerged 14-30.vii.1998. Also reared from *Odontites* seedheads from VC 82 & 84.

***P. soenderupi* Hering, 1941**

New to Britain

Puparia found in old flower stalks of *Caltha palustris* by Dunalastair Water (O.S. Grid

NN6858), Rannoch, Perthshire (VC 88) on 26.vii.2000, produced a fly of this species on 9.iii.2001 (puparia kept indoors). Further puparia collected from *Caltha* stems in a roadside ditch near Rawthey Bridge (O.S. Grid SD7197), Fell End, Cumbria (VC 69) on 5.viii.2000, emerged indoors on 8.i.2001. All puparia were found only in the old flower stalks, sometimes as many as 10 puparia per stalk - none were found in the petioles of leaves in spite of the statement in Spencer (1976). Identification is based on the morphology of the fly supported by the larval biology (Spencer, 1976). Also recorded from Kingsdale, Yorkshire (VC 64). As yet there are no published British localities for this species although it was added to the British list by D. Henshaw in Chandler (1998).

***P. vitalbae* Kaltenbach, 1872**

New to Scotland

Leaf mines in *Clematis vitalba* growing in a garden in the centre of Fort William (O.S. Grid NN1073), Westernness (VC 97) on 3.xi.1998 produced flies of this species indoors on 15.xi.1998. Vacated mines were also seen at Carlops (O.S. Grid NT1656), Midlothian (VC 83) on 4.xi.1995.

These additions bring the list of species of Agromyzidae recorded in Scotland to 188 which represents just over half of the British known species.

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